FACULTY MENTOR
Garudadri, Harinath

PROJECT TITLE
Human Activity Classification and Quantification
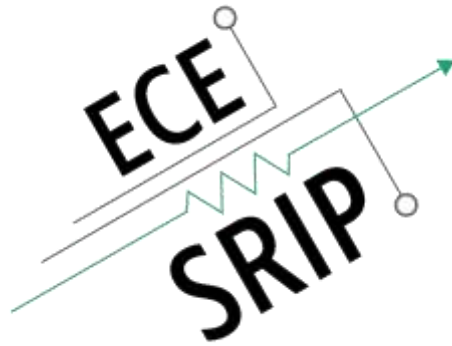
PROJECT DESCRIPTION
Our goal is to develop signal processing and machine learning algorithms to classify human activity and quantify motion. We have an ongoing video data collection at the UCSD Hillcrest hospital, along with some ground truth.

INTERNS NEEDED
1 BS student and 2 MS students

PREREQUISITES
Programming: Python, Machine Learning Library (e.g. TensorFlow or PyTorch), OpenCV, Matlab; Algorithms: Statistical Signal Processing (parameter estimation, Bayesian tracking, etc), Deep Learning (feature extraction, regularization, etc).

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PROJECT TITLE
Ambulatory Pupillometry

PROJECT DESCRIPTION
A single board computer with camera to track eyes and measure pupil dimensions in realtime; with applications in estimating cognitive load and attention.

INTERNS NEEDED
1 BS student and 2 MS students

PREREQUISITES
Programming: C/C++, Python, OpenCV, Matlab; Algorithms: Computer Vision, Image Signal Processing, Machine Learning (kNN, Decision trees, SVMs etc).